

January 1991

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Recommended Citation

Dean M. Hashimoto. "A Tribute to Justice William J. Brennan, Jr.: His Use of Scientific Evidence in Constitutional Adjudication."
Washburn Law Journal 30, (1991): 191-196.

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A Tribute to Justice William J. Brennan, Jr.: His Use of Scientific Evidence in Constitutional Adjudication

Dean M. Hashimoto*

Upon retirement after the end of the last Supreme Court term, Justice William J. Brennan, Jr. took his deserved and indisputable place in history among the great justices who have served on the United States Supreme Court. Like Chief Justice John Marshall, he not only left his mark but actually transformed constitutional law during his thirty-four year tenure. Just as Chief Justice Marshall established the power of the federal judiciary, Justice Brennan shaped the federal judiciary's protection of human rights.

Justice Brennan was the intellectual genius of the Warren Court who gave a whole new meaning to the concept of civil liberty. During 1964, at the zenith of the Warren Court, he wrote twenty-four opinions for the Court and no dissents. When asked what opinions are most significant, he frequently mentions *New York Times Co. v. Sullivan*,¹ *Baker v. Carr*,² and *Goldberg v. Kelly*.³ These are the seminal modern cases in the areas of freedom of speech, right to vote, and procedural due process.

He contributed in many other areas, including gender discrimination, the takings clause, and free exercise of religion. Justice Brennan transformed constitutional law to reflect a vision of society in which liberty and human dignity are sacrosanct. He must be ranked among the few justices whose philosophies shaped the constitutional law of their times, including Chief Justices Marshall and Hughes and Justices Holmes and Brandeis.

During his term on the Burger and Rehnquist Courts, Justice Brennan further expanded his constitutional views through opinions and dissents. He became the greatest dissenter and the only justice to have made significant contributions as a writer both for the Court and in dissent. The persuasive quality of these dissents is demonstrated by either subsequent reversal by the Court or corrective legislation by Congress.

I had the honor of serving as a law clerk for Justice Brennan during the 1987 October term. That term was but a thin cross section of his judicial career; however, it may serve as an example of his work in the

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1. 376 U.S. 254 (1964). In defamation claims brought by a public official, the official must prove that the false statement was made with actual malice. *Id.* at 279.

2. 369 U.S. 186 (1962). By rejecting the political question barrier, the Court expanded jurisdiction over the issue of one-person, one-vote. *Id.* at 209.

3. 397 U.S. 254 (1979). The Court held that due process requires an evidentiary hearing before termination of welfare benefits. *Id.* at 261.

1980s. There were at least four important opinions that he wrote for the Court during that term: *United States v. Paradise*,⁴ *School Board v. Arline*,⁵ *Johnson v. Transportation Agency*,⁶ and *Edwards v. Aguillard*.⁷ But, in my opinion, it was his dissent in *McCleskey v. Kemp*,⁸ that history will record as his most significant writing of that term.

As a law clerk, I had a particular interest in *Edwards* and *McCleskey* because they involved issues of law and science. I had trained as a physician before attending the Yale Law School and also continued specialized training in occupational and environmental medicine at Harvard hospitals just before and after my clerkship with Justice Brennan. This medical training included the study of epidemiology, which is the empirical science upon which modern medicine is based. When I applied for a Supreme Court clerkship, at least one Justice expressed skepticism as to the worth of my combined training. But I remember that Justice Brennan, on the first day that I was his law clerk, appeared quite interested in my medical background. He recalled that Justice Douglas had once hired a chemist—who had no legal training—to work on intellectual property cases. He seemed pleased that he was establishing an otherwise new precedent in clerk-hiring. Justice Brennan's fascination for science and technology in general, and medicine in particular, was occasionally reflected in his opinions.

His respect for science and education was apparent in *Edwards v. Aguillard*.⁹ The case involved a Louisiana statute that prohibited the teaching of evolution in public elementary and secondary schools unless accompanied by instruction in the theory of "creation science." Neither evolution nor creation science was statutorily required to be taught, however, if one theory was presented, the statute required the inclusion of the other theory. It defined the theories as "the scientific evidences for [creation or evolution] and inferences from those scientific evidences."¹⁰

The Court in *Edwards* held that the Louisiana statute violated the establishment clause because it served a religious purpose. In the opinion for the Court, Justice Brennan noted that the statute must be considered in its historical context. As in *Epperson v. Arkansas*,¹¹ the statute was a

4. 480 U.S. 149 (1987). Race-conscious relief was justified by the compelling governmental interest in eradicating the history of discriminatory hiring of state troopers. *Id.* at 170.

5. 480 U.S. 273 (1987). At a time when the AIDS epidemic was becoming a national concern, § 504 of the Rehabilitation Act of 1973 was interpreted to apply to contagious diseases. *Id.* at 284.

6. 480 U.S. 616 (1987). Affirmative action for women based on a prior violation of Title VII of the Civil Rights Act of 1964 was allowed. *Id.* at 641.

7. 482 U.S. 578 (1987). A Louisiana state law requiring the teaching of creation science in the public schools was determined to violate the establishment clause. *Id.* at 589.

8. 481 U.S. 279 (1987). The Georgia capital sentencing process was held constitutional despite an empirical study indicating the sentencing determinations included racial considerations. *Id.* at 290.

9. 482 U.S. 578.

10. *Id.* at 589-93.

11. 393 U.S. 97 (1968).

product of fundamentalist religious fervor that viewed the theory of evolution as contradicting the literal interpretation of the Book of Genesis. The purpose of presenting "scientific evidence" to public school children to support creation science was to tailor the curriculum to the teachings of this particular religious group.¹²

In addition to emphasizing the historical context of the statute, Justice Brennan noted that the particular teaching arrangement itself was not neutral from a religious standpoint. The Louisiana statute required that scientific evidences supporting a single, particular religious viewpoint be juxtaposed against scientific evidences supporting the theory of evolution or else neither could be taught. Justice Brennan suggested that if teaching a diversity of scientific theories examining the origins of humankind was required in order to enhance the teaching effectiveness of science instruction, this might well be valid under the establishment clause.¹³

Justice Brennan emphasized the importance of the context of scientific evidence in determining whether it had a religious function. This view recognizes that scientific evidence is no different than other types of evidence in that it may be used to support and endorse a particular religious viewpoint and does not possess an inherently secular quality. The unique characteristic of scientific evidence that was, however, relevant in *Edwards* was the fact that our society often finds scientific evidence to be of higher persuasive quality than other kinds of evidence. Thus, requiring schoolteachers to support a particular religious viewpoint with scientific evidence was, in part, an endorsement of religion because of the authoritative nature of scientific evidence.

This recognition of the value of scientific evidence and the importance of considering it contextually were also themes in the dissent by Justice Brennan in *McCleskey v. Kemp*.¹⁴ The petitioner in that case challenged the Georgia capital sentencing process as violative of the eighth and fourteenth amendments because it was operated in a racially discriminatory manner. In support of the claim, the petitioner relied on the Baldus study, a large empirical study that showed a disparity in the imposition of the death penalty based on the murder victim's race, and, to a lesser extent, on the defendant's race. The study considered 230 nonracial factors that might legitimately influence a sentencer, but concluded that the jury more likely than not would have spared the petitioner's life had his victim been black.¹⁵

In dismissing the eighth amendment claim, the *McCleskey* Court assumed the validity of the Baldus study and acknowledged that the peti-

12. *Edwards*, 482 U.S. at 589-93.

13. *Id.* at 593-94.

14. 481 U.S. 279 (1987).

15. *Id.* at 325 (Brennan, J., dissenting).

tioner showed a risk that racial prejudice played a role in his sentencing. It nonetheless concluded that the probability of prejudice was insufficient to find a constitutional violation. The Court emphasized that it was impossible to prove the influence of race on any particular sentencing decision based on the Baldus study.¹⁶

In his eloquent dissent, Justice Brennan addressed these issues in the context of his eighth amendment analysis. He reviewed past precedent and concluded that defendants challenging their death sentences had not previously needed to demonstrate that impermissible considerations were the "but for" cause or "cause in fact" of their sentencing decisions. Instead, the Court had required that defendants show that the system under which they were sentenced posed a significant risk of such an occurrence.¹⁷ Justice Brennan further noted that *McCleskey* differed in one important aspect from earlier cases. *McCleskey*'s claim was the "first to base a challenge not on speculation about how a system might operate, but on empirical documentation of how it does operate."¹⁸

The multiple regression analysis used in the Baldus study produced data that describes "the risk" of impermissible factors influencing sentencing. Modern empirical science no longer relies on the assumption of "but for" causation or "cause in fact." This assumption had been consistent with the Newtonian view that an absolute causal connection could be deduced between events. The modern concept of "causal tendency" is, however, based on the view of contemporary science, particularly in physics and epidemiology, that we can only determine the chances (or risk) of a causal connection through inductive reasoning.¹⁹ The Court's insistence on a requirement of "but for" cause means that modern empirical studies that quantify risk are irrelevant to this kind of constitutional decision making. Ironically, such evidence is best suited to identify institutional effects on aggregates of people and to isolate impermissible factors that account for these effects.²⁰

Justice Brennan also considered the Baldus study in its proper context: "Evaluation of *McCleskey*'s evidence cannot rest solely on the numbers themselves. We must also ask whether the conclusion suggested by those numbers is consonant with our understanding of history and human experience."²¹ He then reviewed the dual system of criminal punishment based on race that had been historically documented in the

16. *Id.* at 308.

17. *Id.* at 323-24.

18. *Id.* at 324.

19. The legal concept of causal tendency or causal linkage in tort law was developed by Professor Guido Calabresi. See Calabresi, *Concerning Cause and the Law of Torts: An Essay for Henry Kalven, Jr.*, 43 U. CHI. L. REV. 69, 71 (1975).

20. *McCleskey*, 481 U.S. at 327.

21. *Id.* at 328.

nineteenth and twentieth centuries. He concluded that this history was consistent with the quantitative findings of the Baldus study.²²

Justice Brennan intuitively used a technique routinely employed by biostatisticians and epidemiologists to determine causality. An isolated empirical study cannot establish causality. Rather, it is important to examine the study's findings in light of known facts such as biological plausibility and consistency with previous findings.²³ Even from a purely scientific view, the context of the empirical study is important to understand in order to determine its true significance.

In both *Edwards* and *McCleskey*, Justice Brennan emphasized the importance of scientific knowledge and the value of considering the knowledge in its proper context. These understandings permeate his other opinions as well, including *Craig v. Boren*²⁴ and *Cruzan v. Missouri Department of Public Health*.²⁵

I believe that these insights of Justice Brennan are important and will prevail. Our institutional responses should be shaped by both scientific and social knowledge. Large scale empirical studies are being conducted in increasing numbers because they provide valuable information about the effects of social institutions and conditions on aggregates of people. Otherwise unavailable information about the competencies and failings of institutions is gained because of statistical analysis. However, as Justice Brennan has suggested, it is important to consider scientific knowledge and evidence in a social context. While the scientific culture emphasizes "provability," the legal culture has a somewhat different focus—"persuasiveness." To assign social worth to scientific knowledge and to determine its legal significance requires that scientific information be considered in light of its social context.

Thus, Justice Brennan has treated scientific information as but a piece of the puzzle when interpreting the Constitution. This is consistent with his larger view of constitutional interpretation. He believes that constitutional interpretation cannot be based on "pure reason."²⁶ He has insisted that:

The struggle for certainty, for confidence in one's interpretive effort, is real and persistent. Although we may never achieve certainty, we must continue in the struggle, for it is only as each generation brings to

22. *Id.* at 329-33.

23. C. HENNEKENS & J. BURING, *EPIDEMIOLOGY IN MEDICINE* 40-41 (1987).

24. 429 U.S. 190 (1976). A statute prohibiting the sale of beer to males under the age of 21, and females under the age of 18, was struck down based on gender discrimination. *Id.* at 203.

25. 110 S. Ct. 2841 (1990)(Brennan, J., dissenting). A state may require a clear and convincing evidence standard in proceedings in which a guardian seeks to discontinue nutrition and hydration of a person diagnosed to be in a persistent vegetative state. *Id.* at 2852.

26. Brennan, Reason, Passion, and "The Progress of the Law," Lecture by Justice William Brennan, before the Association of the Bar of the City of New York (Sept. 17, 1987).

bear its experience and understanding, its *passion and reason*, that there is hope for progress in the law.²⁷

Scientific knowledge and evidence may contribute to the reasoning process and, as in the case of *McCleskey*, even invoke the passion necessary in constitutional interpretation. Justice Brennan strongly believes that our vision of the Constitution must be based not only on rationality, but also on decency and fairness.

Justice Brennan's expansive influence on modern constitutional law can be explained in a number of ways: his passion and rationality; his creative intellect and encyclopedic memory; his personal warmth and sense of community with the rest of the Court; his work ethic and eternal optimism. But in my view, the best explanation for his influence is his social and scientific insight into the human condition and his powerful persuasiveness, a consequent redefinition of civil liberty.

27. *Id.*